IN THE SPECIFICATION

Please amend the specification paragraph beginning at page 11, line 13 as follows:

FIG. **4** is a pictorial representation of a two step process according to an embodiment of the present invention. In this example, a workpiece undergoes processing by Operation A **410** and then undergoes processing by Operation B **420**. Operation A **410** can be performed by three different machines, Machine A_1 **411**, Machine A_2 **412**, or Machine A_3 **413**. Operation B **420** can be performed by four different machines, Machine B_1 **421**, Machine B_2 **422**, Machine B_3 **423**, or Machine B_4 **424**. In an embodiment of the present invention a combination of these operations can be treated as a single operation such that, instead of analyzing Operation A **410**, then Operation B **420**, Operation A-B **400** can be analyzed singly. In order to treat a plurality of operations as a single operation or machine, the route of the workpiece undergoing processing must be provided. Specifically, the multiple routes are each assigned a group. As described herein, the number of groups in this example is 12, given by the equation:

$$G_n = N_a * N_b$$

where, G_n is the number of possible routes, or groups, through Operation A-B **400**, N_a is the number of machines performing Operation A **410**, and N_b is the number of machines performing Operation B **420**. In this embodiment the number of possible routes, or groups, of Operation A-B **400** is 12. Here the possible groups are:

Group 1 : $A_1 - B_1$

Group 2 : $A_1 - B_2$

Group 3 : $A_1 - B_3$

Group 4: $A_2 - B_1$

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Group 12 : $A_3 - B_4$

Further, in the case such as provided in FIG. **4** the number of possible routes is the mathematical

product of the number of possible individual machines performing an operation and the number of possible machines performing the other operation. However, in the general case with more then two operations being performed by multiple machines, a simple mathematical product is not sufficient. Given a multiple number of operations with a number of machines performing such operation, Operation 1 (O_1) with N_1 machines, Operation 2 (O_2) with N_2 machines, Operation 3 (O_3) with N_3 machines, through to Operation t (O_t) with N_t machines. The number of possible ~~groups~~ routes through O_1 and O_2, can be expressed as the product of N_1 and N_2. The number of the combinations of two random operations from all possible operations, t operations can be expressed as:

$$\cancel{C = \{t*(t-1)\}/2!}$$

$$Y = {}_tC_2 = \{t*(t-1)\}/2!$$

where ~~C~~ Y is the number of combinations and t is the number of operations. The number of ~~groups~~ routes is given by the sum of the ~~groups~~ routes for all the combinations, as given by the equation:

$$X = (G_{1\&2} + G_{1\&3} + \ldots + G_{1\&t}) + (G_{2\&3} + G_{2\&4} + \ldots + G_{2\&t}) + \ldots + (G_{(t-1)\&t})$$

~~and~~ or

$$X = (N_1 * N_2 + N_1 * N_3 + \ldots + N_1 * N_t) + (N_2 * N_3 + N_2 * N_4 + \ldots + N_2 * N_t) + \ldots + (N_{t-1} * N_t)$$

where $G_{(t-1)\&t}$ is a representation of the number of ~~combinations~~ routes of machines between operation (t-1) and operation t, N_t is the number of machines performing a particular operation t and X is the number of groups for all ~~combinations~~ routes.

Please amend the specification paragraph beginning at page 13, line 1 as follows:

Generally, the number of combinations of random n operations is given by:

$$Y = tC_n$$

where Y is the total number of combinations[[,]] and t is the number of operations~~ and C_n is the number of individual machines performing a particular step~~. If the average of the number of possible routes among the operations is assumed to be G, generally, the sum of the number of possible routes in all t operations is given by:

$$\cancel{Y = \sum_{n=1}^{t} tC_n * G}$$

$$\underline{X = \sum_{n=1}^{t} Y * G = \sum_{n=1}^{t} tCn * G}$$

where ~~Y~~ X is the total number of routes of all combinations, t is the number of operations, and G is the average of the number of possible routes ~~and C_n is the number of individual machines performing a particular step in the process~~.